

# Integrated power system

Versatile and powerful solution for any application

The combination of cost-effective design, power density and reliability makes the Flatpack2 a product family that truly stands out and provides unparalleled network availability. The versatility of the Flatpack2 rectifier means that it can be used in a wide variety of 48VDC and 24VDC applications across the globe



## Flatpack2, 5U - 8U Integrated DC Power supply system, 150A – 600A

Doc 200000.DS3 – rev10

### APPLICATIONS

#### TELECOM – MOBILE / WIRELESS

- Radio Base stations/ Cell Sites
- LTE / 4G / WiMAX
- Distributed Antenna Systems
- Microwave
- Broadband

#### TELECOM – FIXED

- Telephony servers / switches
- Fiber Optics / FTTx
- Microwave
- Cable
- Broadband



Smartpack R controller



Flatpack 2 48/2000 SHE rectifier

### KEY FEATURES

- COMPLETE SYSTEM
- SMARTPACK R CONTROLLER
- ADVANCED CONTROL AND MONITORING THROUGH ETHERNET PORT
- USB TYPE A HOST FOR PLUG-IN DEVICES (EG. WIFI; FLASH DRIVES)
- USB TYPE B FOR CONTROL
- SUPER HIGH EFFICIENCY RECTIFIERS
- HOT PLUGGABLE MODULES
- 6X BATTERY BREAKER POSITIONS
- LVBD
- 18X LOAD MCB DISTRIBUTION
- LVLVD (OPTIONAL)
- 5U TO 8U HEIGHT
- GLOBAL APPROVALS

# Flatpack2, 5U – 8U Integrated



Doc 200000.DS3 – rev10

MODEL	24VDC	48VDC
Part number (Configured Telecom power system)	CTO2xxxx.nnnn	CTOxxxxx.nnnn

## POWER MODULE

Flatpack2 rectifier <sup>1)</sup>	Flatpack2 24/1800 HE	Flatpack2 48/2000 HE or SHE Flatpack2 48/3000 HE or SHE
-----------------------------------	----------------------	--

## INPUT DATA

Voltage (range)	85-300 V <sub>AC</sub>	85-300 V <sub>AC</sub> (HE module) 85-264 V <sub>AC</sub> (SHE module)
Frequency	45-66 Hz	
Mains configuration	Individual <sup>2)</sup> / 1p230 V <sub>AC</sub> TN / 3p400 V <sub>AC</sub> TN / 1p230 V <sub>AC</sub> IT / 3p230 V <sub>AC</sub> IT	
Connection	Terminal blocks, 16 mm <sup>2</sup> max	

## OUTPUT DATA

Voltage	+24 V <sub>DC</sub>	-48 V <sub>DC</sub>
Current (maximum)	600 A	600 A

## BATTERY DISTRIBUTION

Number of battery breaker positions	6x 100 A	
LVBD	Default 300 A / 600 A	Optional 150 A / 300 A / 500 A / 600 A

## LOAD DISTRIBUTION

Number of load MCB positions	18x 18 mm or 9x 18 mm + 6x 27 mm	
LVL D	Optional 300 A / 600 A	Optional 150 A / 300 A / 500 A / 600 A
Load breaker type	DIN rail mounted, 18 mm and 27 mm wide (13 mm on request)	

## CONTROL AND MONITORING

Control and Monitoring unit <sup>3)</sup>	Smartpack R	
Inputs	6x Digital inputs (for monitoring of external equipment)	
Outputs	6x Alarm relays	

## OTHER SPECIFICATIONS

Isolation	3.0 kV <sub>AC</sub> – input to output 1.5 kV <sub>AC</sub> – input to earth 0.5 kV <sub>DC</sub> – output to earth	
Operating temperature	-40 to +60 °C [-40 to +140 °F]	
Storage temperature	-40 to +85 °C [-40 to +185 °F]	
Dimensions (W x D x H) <sup>4)</sup>	482 x 380 x H mm [19 x 14.9 x H inch] Height (H): - 5U: 222 mm [8.8 inch] - 6U: 267 mm [10.5 inch]	482 x 380 x H mm [19 x 14.9 x H inch] Height (H): - 5U: 222 mm [8.8 inch] - 6U: 267 mm [10.5 inch] - 7U: 311 mm [12.3 inch] - 8U: 356 mm [14 inch]
Weight (excluding modules)	Approximately 5 kg [11 lbs]	

## DESIGN STANDARDS

Electrical safety	IEC/UL 60950-1 CSA 22.2	
EMC	ETSI EN 300 386 v1.3.2 EN 61000-6-2 /-3	
Environment	ETSI EN 300 019-2-1 (Class 1.2) /-2 (Class 2.3) /-3 (Class 3.2) ETSI EN 300 132-2 Normal operating conditions as per IEC 62040-5-3:2016 clause 4.2. Other operating conditions as per IEC 62040-5-3:2016 clause 4.3, must be advised	

1) See Flatpack2 rectifier datasheet for details

2) When system is configured without SPD device option

3) See Smartpack R controller datasheet for details

4) Recommended minimum cabinet depth is 400 mm [15.7 inch]